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THE MONTESSORI METHOD AND THE KINDERGARTEN

By ELIZABETH HARRISON
NATIONAL KINDERGARTEN COLLEGE, CHICAGO, ILL.

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, January 5, 1914.

SIR: It has been said that Rousseau discovered childhood, and Froebel, infancy. For the teachers of the eighteenth century the child was a little man or woman, different from the adult only in size, strength, and knowledge. For it there was no growth, only expansion. Education consisted in training and instruction—not in development. It was artificial rather than natural. Whatever came by nature could, in the minds of most, be only evil.

The worthiness, rightness, and rights of the child's nature, and the importance of self-development, formed the burden of the message of Rousseau and his disciples. For them childhood was not manhood or womanhood in miniature, but something different, with interests, ideals, virtues, and activities of its own, a stage in the development of the individual, on the proper unfolding, strengthening, and functioning of which depends the welfare of the future man or woman. But Rousseau understood little of infancy. He counted it fortunate if the infant died in infancy. His own children he sent to the foundling hospital and took care that there were no marks on their clothing by which they might afterwards be identified. It remained for Froebel, with his sensitive woman soul, his philosophical mind, his poetic feeling for the oneness of the universe, and his prescient grasp of the fundamental principles of evolution, to comprehend infancy—the first six or seven years of life—as the most important period in the life of the individual, and its proper treatment as the most important problem in education. After long years of study of infancy in the light of philosophy, he embodied what he conceived to be the fundamental principles of the education of little children in his doctrine of the kindergarten, and his ideas of the best means for the application of these principles in his kindergarten program, materials, and devices. This *discovery* of the kindergarten—for such he called it (not the kindergarten, but infancy was the real discovery)—made a new tendency in education, and is one of the significant events marking a new era in the history of the world. From the day of this discovery until now interest in child study has

constantly increased, and the care and education of little children has become constantly more intelligent, both in the home and in the school. Though suppressed for many years by governmental authority in Germany and received with much suspicion elsewhere, the kindergarten movement has extended to all the world and has become an integral part of the public-school system of many cities and States. Its introduction into England was championed by Charles Dickens, the novelist and friend of children. In America the kindergarten found an advocate in our great philosopher and educator, Dr. William T. Harris, sometime United States Commissioner of Education.

For Froebel, as for the originator of every great reform, the principle was the essential and abiding thing, the form, however perfect, more or less accidental and passing. The thing of importance was the proper care and right education of little children rather than the transmission of an unchanging institution or the perpetuation of a program. But here, as elsewhere, form is more apparent than principle, method than purpose and aim. As in Goethe's Faust, Helen, the spirit of beauty, vanishes, leaving only her garments, more or less antiquated and outworn forms, to the aspiring Faust, so from the organized kindergarten too often has the spirit of the truth-seeking, child-loving, freedom-desiring Froebel departed, leaving only the form through which the spirit expressed itself. Not always has the kindergarten welcomed the discoveries of scientific child study, and to the extent that it has failed to do this it has lost the confidence of those who are interested more in the child than in a name, program, or cult. This indictment is, of course, not intended to apply to all kindergartens, nor the implied loyalty to form rather than to principle to all kindergartners. Many, probably most, of the leading kindergartners have welcomed eagerly every new truth and have tried earnestly and with more or less success to make it effective in their practical teaching.

Recently an earnest, brilliant, and learned Italian woman, Dr. Maria Montessori, has become famous, probably beyond her desire, for her contribution to our knowledge of little children and for the embodiment of her own and the discoveries of others in what she likes to call "a method of a new science of education." Her scientific investigations as a biologist and physician have led her to the formulation or acceptance of a doctrine of education for little children essentially the same as that at which Froebel arrived by another road—that of carefully observed, intelligently directed self-development. The schools (*case dei bambini*) for little children in Rome in which Dr. Montessori is trying out the methods and devices which she has invented or accepted for the application of her principles are attracting earnest students of education from all the world, and

especially from America, and they count themselves fortunate who have opportunity to come under Dr. Montessori's immediate instruction. Enthusiastic disciples are establishing similar schools here and have formed themselves into a national society for the study and extension of the Montessori principles and methods, interest in which has been much increased by the recent visit of Dr. Montessori to this country and by the lectures which she delivered in several of our largest cities.

Though aims and principles are the same for both Froebel and Montessori, their different methods of approach have resulted in difference in emphasis, program, and devices. For those who see no further than the form, there is apparent conflict; many can not easily understand that the work of both Froebel and Montessori, with that of many other earnest students and teachers, must finally lose, each, its distinctive characteristics and individuality, in the larger whole of a more perfect knowledge of the nature of infancy and the means of educating young children.

To this end the careful study of Dr. Montessori's work by those who are familiar with the teachings of Froebel and the best practices of the kindergarten can not fail to be helpful. For this reason I recommend that the manuscript transmitted herewith, prepared by Miss Elizabeth Harrison, president of the National Kindergarten College, be published as a bulletin of the Bureau of Education, for distribution among kindergartners and others directly interested in the education of children below the ordinary American school age. Miss Harrison, who has long been identified with the kindergarten movement in America and has observed the kindergarten in all of its most important centers, was sent to Rome by the National Kindergarten Association that she might make a thorough study of Dr. Montessori's methods. This manuscript was prepared after a stay of some months in Rome, studying with Dr. Montessori and observing in the *case dei bambini.*

Respectfully submitted.

P. P. Claxton,
Commissioner.

To the Secretary of the Interior.

THE MONTESSORI METHOD AND THE KINDERGARTEN.

I. INTRODUCTION.

The educational world is still eagerly discussing the comparative merits of an experiment which was made by Dr. Maria Montessori in Rome with a few poor children gathered from the tenement districts of that city and placed by her in large, light, airy rooms connected with a model tenement house recently established by an association of philanthropic Roman citizens.

Much misunderstanding prevails with regard to Dr. Montessori's work. Notwithstanding the fact that she has somewhat suddenly attained a world-wide reputation, she modestly claims to have established only one pedagogical laboratory, her idea being that many more must be established and the results compared before a scientific system of pedagogy can be worked out. She lays no claims to a new method of pedagogy, but rather to a method of a new science of pedagogy. The beginnings of this new science had already manifested themselves in education by the special attention given to physically handicapped children, to mentally defective individuals, and to moral derelicts. The same influence is observable in many other directions—in the attempts to provide a wholesome recreation for the congested sections of our great cities; in the effort to deepen social life for the isolated workers in the agricultural districts; in the advocacy of farm life for boys instead of juvenile courts and houses of correction. It is also observable in the more scientific treatment of prisoners in our more advanced penal institutions. Eugenics, hygiene, anthropology, and similar studies have become topics of general interest instead of subjects reserved only for specialists. Better still, we are awakening to the fact that the efforts of "experimental psychology," although they have brought forth valuable by-products, have failed to reduce man to the laws of physics. The inner spirit or personality of man has refused to be reduced to the laws of mere organic matter. Dr. Montessori's work is thoroughly in accord with this principle. Notwithstanding her exacting and thorough training as a scientist, she has absolute faith in the importance of the study of the child's ego or personality and claims that it will be the chief concern of pedagogy in the near future.

Any estimate of Madame Montessori's work, to be of practical value to the mother or teacher, will necessarily involve a comparison between the Montessori method and that of the kindergarten, since the kindergarten is the only system of organized educational work for young children that has so far received general recognition. It is important to remind ourselves, however, that the welfare of the little child is of far more significance than the mere settlement of rival claims between the kindergarten and Montessori. Only by taking this larger view of the subject can we come to any just or satisfactory estimate of Dr. Montessori's education of young children, and that will be the chief consideration in this bulletin rather than an extended account of her psychological view, which is not new. It will be necessary to show, however, how the latter has shaped the former.

The contributions in Dr. Montessori's work that are of most practical value to us come largely from her training as a physician and a student of anthropology. It is doubtful if any kindergartner has made so thorough a study of the physical needs of children. She has also the advantage of the scientific advance which experimental psychology has made since Froebel's day, concerning the effects of the bodily condition upon the mental progress of children. Owing to her anthropological studies, she has furnished us with a very simple and easily comprehended chart, which shows the average height, weight, etc., of the normal child, at 1, 2, 3, 4, and 5 years of age, and thereby gives a standard, by means of which the abnormality of any child can be easily ascertained.

The kindergarten as organized by Friedrich Froebel in Germany in the middle of the last century has been much enriched and improved by American kindergartners. Any one who visits the average European kindergarten, where the work seems to be in an almost hopeless stage of formalism, will appreciate this fact. This is not implying a criticism upon Froebel's central thought, however, for even in America it has not been fully understood, nor carried out as it some day will be. Indeed, one of the valuable things Dr. Montessori has done has been to stir up the kindergarten world and set its leaders to thinking of their present limitations, and how they can do better work.

II. THE PRINCIPLE OF FREEDOM.

The first thing to be considered in any method of training worthy of consideration is the fundamental principle on which that system is based. In Dr. Montessori's case this is easily stated. She believes that the child's inner self or personality can not rightfully

develop unless it is free to express itself undirected and unguided by another person. Therefore, she insists that each child must be allowed to be bodily free and have as much unhampered liberty of action as possible, in order that he may fully express his inner life in outer activity. The child's liberty is to be unlimited, except where it clashes with the liberty of another person or endangers life.

Dr. Montessori states in her chapter on discipline:

> We call an individual disciplined when he is master of himself, and can therefore regulate his own conduct when it shall be necessary to follow some rule of life. Such concept of active discipline is not easy to comprehend nor to apply. But certainly it contains the great educational principle, very different from the old-time absolute and undiscussed coercion of immobility. And such technique is necessary to the teacher who is to lead the child along such a field of discipline, if she is to make it possible for him to continue in this way all his life; advancing indefinitely toward perfect self-mastery. * * *
>
> If any educational act is to be efficacious, it will be only that which tends to help toward the complete unfolding of this life; to be thus helpful, it is necessary rigorously to avoid the arrest of spontaneous movements and the imposition of arbitrary tasks. It is, of course, understood here that we do not speak of a useless or dangerous act; this must be suppressed, destroyed.

In this she differs from Froebel, who would have the mother stimulate or help to awaken the child's instincts, even in the young infant, as shown by his commentary on the little songs included in the Mother Play Songs, wherein he states that the mother's training of her child begins by thus guiding aright the first physical and spontaneous activities of his limbs. It is true that in the "Education of Man," written 10 years earlier, Froebel had said: "Education in instruction and training, originally and in its first principles, would necessarily be passive, following (only guarding and protecting), not prescriptive, categorical, interfering."[1] This passage in Froebel's writings has perhaps caused more discussion than any one statement in any modern pedagogical writing. Yet even in the same volume Froebel modifies his statement by comparing the child's training to the trimming of the grapevine, which, to bear its best fruits, must be occasionally pruned. There is also his belief in the need of a wise and patient guidance on the part of the mother, as evidenced by the Mother Play. We shall have to conclude, therefore, that absolute freedom was not intended.

Herbert Spencer exemplifies the same urging of greater liberty for the child: "The proper function of education in preparation for complete living is the free exercise of all our faculties." Many more educators could be quoted as urging greater freedom in childhood.

Undoubtedly there has been too much domineering on the part of the teacher in the past, yet must not the wisdom of the ages guide the child? Else how is he to find the "eternal verities" of life

[1] Section 7.

or the time-tested standards of real moral conduct? It is practically impossible to leave the child absolutely unguided and undirected. To a large degree, Dr. Montessori substitutes for personal authority, impersonal materials, which check and direct the child. Yet, even in her schools in Rome, there were times when the teacher's authority had to be used, and it still remains a problem as to how far it is wise to eliminate all consciousness, on the part of the child, of intelligent authority, sympathetically applied, to his guidance and conduct.

Dr. Montessori gives an excellent illustration of the stupid hindering which untrained or unsympathetic teachers too often impose upon children, entirely unconscious of the mischief they are doing to the young and growing life.

> One day the children had gathered themselves, laughing and talking, into a circle about a basin of water containing some floating toys. We had in the school a little boy barely 2½ years old. He had been left outside the circle, alone, and it was easy to see that he was filled with intense curiosity. I watched him from a distance with great interest; he first drew near to the other children and tried to force his way among them, but he was not strong enough to do this, and he then stood looking about him. The expression of thought on his little face was intensely interesting. I wish that I had had a camera, so that I might have photographed him. His eyes lighted upon a little chair, and evidently he made up his mind to place it behind the group of children and then to climb on it. He began to move toward the chair, his face illuminated with hope, but at that moment the teacher seized him brutally (or, perhaps, she would have said, gently) in her arms and, lifting him up above the heads of the other children, showed him the basin of water, saying, "Come, poor little one, you shall see, too!" Undoubtedly, the child, seeing the floating toys, did not experience the joy that he was about to feel through conquering the obstacle with his own force. The sight of those objects could be of no advantage to him, while his intelligent efforts would have developed his inner powers. The teacher hindered the child in this case from educating himself without giving him any compensating good in return. The little fellow had been about to feel himself a conqueror, and he found himself held within two imprisoning arms, impotent. The expression of joy, anxiety, and hope, which had interested me so much, faded from his face and left on it the stupid expression of the child who knows that others will act for him.

There is scarcely a supervisor of kindergartens who has not witnessed similar pathetically injurious scenes. Froebel goes even further than this when he says:

> The child should, from the very time of his birth, be viewed in accordance with his nature, treated correctly, and given the free, all-sided use of his powers. By no means should the use of certain powers and members be enhanced at the expense of others, and these hindered in their development; the child should neither be partly chained, fettered, nor swathed; nor, later on, spoiled by too much assistance. The child should learn early how to find in himself the center and fulcrum of all his powers and members, to seek his support in this, and, resting therein, to move freely and be active, to grasp and hold with his own hands, to stand and walk on his own feet, to find and

observe with his own eyes, to use his members symmetrically and equally. At an early period the child should learn, apply, and practice the most difficult of all arts—to hold fast the center and fulcrum of his life, in spite of all digressions, disturbances, and hindrances.

A kindergartner tells of a child about 5 years of age in her school, who, owing to the extreme wealth of his parents, had been hampered and waited upon until he was almost helpless. She describes the effort which she had made to encourage him in his attempt to put on one of his own wraps without the aid of herself or his nursery maid. She led him to watch the other children as they wrapped and unwrapped themselves and gradually succeeded in having him master the intricacies of fitting on his rubbers, putting on his overcoat and buttoning it up, pulling his hat over his ears, and slipping his hands into his gloves. One day at the close of the school, while she was busy with other duties, she heard him shouting aloud in tones of overflowing joy, "I can do it all myself! I can do it all myself!" as he danced up and down the room in excitement and glee. In telling of the incident, she said, "I never saw more pleasure expressed on the face of a child. I think no present which could have been given to him could have possibly produced such feeling. It was the joy of discovery of power within himself." To many unthinking parents and teachers these simple, ordinary exercises of self-help are looked upon as trivial, whereas in reality they are part of the discipline which produces men and women of power and resource and individuals who are fearless because they are independent.

This tendency toward freedom from rigidity is perhaps the most distinctive characteristic of modern education as compared with that which has come down to us from mediæval times, and which is even yet too prevalent in many of our schools. It gives greater freedom of bodily movement, greater ease of position while studying, does away with fixed seats crowded close to fixed desks, breaks up the machinelike marching to and from classes, adds relaxation of muscles and nerves by rhythmic exercises, increases coordination of muscles and control of bodily movement by well-selected games, and brings composure of manner and self-control by the introduction of simple, dramatic plays. This thought of greater freedom is encouraged by distributing certain duties of the schoolrooms among the students and by letting the pupils formulate certain rules for their own self-government. It is the same principle that allows greater initiative to pupils in discussion in the classroom; it leads to individual research work in the school library; it makes the students express themselves in their own language rather than that of the textbook, write out personal opinions or experiences, and compare information gained from new enterprises with that already known; and it encourages creative handwork, as well as original composition.

To avoid running into caprice, this principle of freedom, of course, must be offset by giving to the pupils the ideal standards of each line of work by means of which they can compare their own work with that of experts.

It is impossible to resist adding a few words of the Dottoressa's protest concerning the abominable practice of giving external prizes and their detrimental effect upon the inner life. With it all true lovers of the real child will agree. She states that when—

> we have once accepted and established these principles of developing power from within, the abolition of prizes and external forms of punishment will follow naturally. Man, disciplined, through liberty, begins to desire the true and only prize which will never belittle or disappoint him—the birth of human power and liberty within, that inner life of his from which his activities must spring.

When we realize the tremendous influence which well-deserved praise and just censure have upon the child we begin to comprehend the immorality of rewarding self-conquest and earnest endeavor (both of which are spiritual activities) by giving to the child mere external rewards. The mother who says to her little one, "If you will be good while I am away I will bring you some candy," lowers the child's standard of moral conduct to the plane of physical gratification and confuses the child's ideas of the higher and lower standards of life. The same is true of the awarding of prizes and, alas, of our universal system of grading pupils by the marking of examination papers. Here again we meet with a tremendous problem not yet solved.

This brings up the much-discussed question whether we are to have in schools arbitrary discipline or no discipline except that which comes from the deed itself or from remembrances of former experiences of failure or discomfort. The "retributory" theory has long been held by many modern educators, but it is nowhere ideally carried out, not even in these Roman schools. Still, they are an advance in the effort at self-control and self-discipline, and as such are most interesting.

This freedom, Dr. Montessori claims, is absolutely necessary for "auto-education," which is but another name for the watchword of the present-day movement in education, "self-activity," the central thought of the kindergarten, and strongly insisted upon by Herbart, Spencer, Dewey, and other modern educational leaders. It is, therefore, no new doctrine; but she has a new method of procedure. In the first place, she demands that the schoolroom in which little children are placed shall have space sufficient for the children to move about in easily, and to allow them to sit, stand, walk, or lie down on the small rugs which are part of the room's furnishings.

This is in order that their bodies may not be taxed by remaining in one position too long. The freedom thus given to the impulse to change the muscular strain of his body whenever the child so wishes (an excellent point) is an advance over and above the amount of freedom allowed in the ordinary kindergarten, which is still far short of the ideal kindergarten. In Rome I saw no boisterousness nor capricious use of this liberty to move about, not even when a little one chose to lie down upon the floor. The children were as natural and normal as any happy and occupied children would be in their own homes, and merely used the liberty to move about when the body seemed to demand it. Of course, the use of small rugs on the floor, which the children unroll when they wish to use them and roll up again when they have finished using them, demands daily cleaning of the floor, a demand of common sense not always carried into execution in our schools.

This keen-sighted physician insists, also, that there shall be two rooms or a room and a courtyard, garden, or open porch, in order that any child may feel free at any time to absent himself from the supervising presence of the teacher and to come and go in the allotted space as he may please. Just how this added freedom can be given in our overcrowded city schools is a problem yet to be solved, but physically and psychologically, it is undoubtedly a good thing for each child to feel that he is free from the supervision of authority for some portion of each day and, therefore, is responsible for his own conduct in order that his personal will power may be developed. It was Emerson who said, "Unless a man hath a will within him, you can tie him to nothing." As parents and teachers we have not fully realized that the development of this much-needed will power within can be naturally increased by this simple device of freeing a child from the consciousness of adult authority. Of course, a mother or teacher who understands this psychological point and who is tactful enough can grant this freedom from the dominating influence of another personality while still bodily present. It takes large sympathies and great self-control to do this, however, and the simple device of another room or courtyard is excellent. On the other hand, it is equally true that every young child should feel at times that he is under guidance and authority, in order that his "group instinct" may develop into the cooperation needed in every advancing stage of life. We are much more apt to insist on our authority being obeyed, however, than on giving a child too much freedom of learning from his own experience.

III. THE DIDACTIC MATERIAL.

For the sake of added development of the spirit of self-helpfulness and the growth of power of initiation Dr. Montessori has introduced into her schools what she calls exercises in practical material. These consist of small, easily handled wooden frames to which are attached pieces of cloth or leather on which are buttons and buttonholes, hooks and eyes, eyelets and lacing cords, and strings to be tied and untied. These are to train the feeble muscles of the small hands of little children to fasten and unfasten their own clothing and to learn thereby the sooner to dress and undress themselves. Independence in the care of their own bodies is considered one of the important steps toward freedom of action and thought. In speaking of the value of her practical exercises, Dr. Montessori says:

> We habitually serve children. This is not only an act of servility toward them, but it is dangerous, since it tends to suffocate their useful, spontaneous activity. We are inclined to believe that children are like puppets, and we wash them and feed them as if they were dolls. We do not stop to think that the child who does not do does not know how to do. He must, nevertheless, do these things, and nature has furnished him with the physical needs of carrying on these various activities and with the intellectual means for learning how to do them; and our duty toward him is, in every case, that of helping him to make a conquest of such useful acts as nature intended he should perform for himself. The mother who feeds her child without making the least effort to teach him to hold the spoon for himself and to try to find his mouth with it, and who does not, at least, eat herself, inviting the child to look and see how she does it, is not a good mother. She offends the fundamental human dignity of her son; she treats him as if he were a doll, when he is, instead, a man confided by nature to her care.

These simple devices for teaching a child to dress and undress himself, as well as to wash his own face and hands, will be of real value in day nurseries and in many kindergartens where children come from disorderly and untrained homes or from homes where the many servants endanger the right development of self-help of children by dressing and undressing them long after their services should be unneeded. I have seen great lubberly boys of 7 and 8 years of age stop on the street while the nursery maid unbuttoned their overcoats and took them off as carefully as if they were helpless infants of 1 year or 2 years of age, thus hindering the real growth of independence and consciousness of personal power. It is but justice to Dr. Montessori to state that these exercises are of further value in the development of the muscles of the hand and the familiarizing of the child with mechanical movement in general. She also insists upon the use of geometric forms as the foundation for all correct and accurate observation of form. In this she agrees once more with the kindergarten, although her geometric forms are somewhat differently presented to the child. Froebel says:

Form, and whatever may depend on form, reveals in various ways inner and spiritual energy. To recognize this inner energy is a part of man's destiny, for thereby he learns to know himself, his relation to his surroundings, and, consequently, absolute being. It is, therefore, an essential part of human education to teach the human being not only to apprehend but also how to represent form.

He then proceeds to explain how geometric forms show this inner energy as incidental forms do not.

Although Dr. Montessori's materials do not possess the creative possibilities that lie in the kindergarten play tools and handwork, nevertheless her "didactic material" supplies a recognized need for that stage of growth in the young child which demands activity for activity's sake and is concerned not so much with the kind of activity as with the desire to be doing something.

This stage of growth easily develops into idle dawdling or into downright destructiveness unless it can be satisfied with strong, substantial material which may be easily handled and quickly mastered by a 2 or 3 year old child. If such material is supplied, it furnishes the beginning of the habit of succeeding at what one undertakes—an important habit. This new "didactic material" seems, by the definite consciousness of mastery which it gives to the child, to bring this desired result.

Perhaps I can not do better than to give a brief account from my journal of a morning spent in the "Casa dei Bambini," at the Via Giusta Convent in Rome.

The acknowledged best demonstration of Dr. Montessori's idea of the education of young children to be found in Rome is this "Casa dei Bambini." The school is under the immediate patronage of Queen Margherita and is in connection with the old and established orphan asylum under the auspices of the Franciscan nuns. The gray and unattractive outer walls of the convent give no idea of the two beautiful and luxuriant courtyards within. These latter are filled with beds of blossoming plants, and the pillars of the inner porch or loggia are covered with clinging vines. The two courtyards are separated by stately series of well-proportioned arches, and the schoolroom in which the class for the children is held opens with wide, double doors into one of these lovely courtyards, where the children play during the hours in which they are not engaged in their Montessori exercises. Most of them come from near-by tenement houses. At one side of the schoolroom there is a small washroom where they all, even the youngest, wash their own hands and faces, put on clean, neat, calico aprons, so that when they appear in the schoolroom they look as fresh and clean as children from well-cared-for homes.

I arrived at the Via Giusta Convent on this particular morning some 15 minutes ahead of the appointed hour, but the rules are rigid, and I had to wait in the small white and gold chapel until 10.30 o'clock, the regulation time. I could, however, hear the happy voices of the busy children in the next room, bustling around, getting the room in order. They had already had the morning prayer before beginning their domestic duties. In a few moments more I heard the ringing shouts of gleeful activity in the courtyards, followed by the rustle and stir of the children returning to the schoolroom, and then a tall, slender nun in the picturesque white garb of the order came to me and announced that I might enter. As I opened the door of the schoolroom the children were busy getting out the "didactic material" with which they were to employ themselves for the next hour and a quarter; some came forward to shake hands with me, in accordance with the pretty and cordial custom of these schools; every visitor is thus made to feel that she is a friend. Some merely smiled and nodded and did not interrupt their work to go through the more ceremonious greeting of handshaking. All seemed busy, happy, and free. There were three of the white-robed nuns in the room. One was at a desk near a window copying some music. She remained all morning, occasionally glancing up from her work, but most of the time seemingly absorbed by it. The second nun was evidently serving in the capacity of physician or trained nurse, as she walked around among the children, occasionally asking a question, feeling the temperature of the hand, or inspecting their physical condition in some other way, from time to time jotting down notes in her notebook. After this tour of inspection she left the room, and her place was taken by a nursery maid or servant, who remained the rest of the morning and accompanied the younger children to and from the toilet when necessary.

There was present a roly-poly, black-eyed baby of about 3 years of age, who was to me the most interesting child of the morning. Perhaps it was because he was evidently at the stage of development to which this "didactic material" was so well suited. He was apparently a newcomer and almost comically helpless. His round fat body caused him to move slowly, and his stubby fingers were not yet under his control. He sat for a while merely gazing at the activities of the busy group around him. By and by the rosy-cheeked nun brought to him the big horn-button frame. She stopped slowly to button and then unbutton one or two of the buttons and then without speaking a word she left him. She had given him what is called a "silent lesson." For one-half an hour by my watch he worked over that difficult problem of buttoning and unbuttoning the large horn buttons, concentrated most of the time upon the task. The first time he succeeded in getting the button through the buttonhole

he called to the rosy-cheeked nun for her approval. She gave it with a smile and a pat on the head. The second button which he mastered he again called to her attention, and again she gave her approval, but this time with apparently less attention. Each time he asked for the approval it grew more incidental. She evidently was consciously trying to wean him from too much desire for approval. By and by, after many stoppings to rest between efforts and to watch the other children, he succeeded in buttoning the whole set of buttons. (There were, I think, six in the frame.) The young nun being busy, he held it up for the admiration of the nursery maid, and she (after the manner of her kind) immediately unbuttoned the entire frame. A wave of indignation overspread the child's face at thus seeing his monumental work undone. He sat silent, with a slightly sullen expression on his face, and I sighed as I thought this was only one incidental evidence on the long list of injustices which ignorance is constantly practicing on innocence.

After five minutes of inertia, Master Roly-poly again picked up the frame and began rebuttoning it; this time not so eagerly nor with such absorbed attention. When it was again buttoned from top to bottom, a matter of at least 10 minutes for his clumsy little fingers, he took it to the cupboard, laid it carefully on the shelf, and came back to his seat and rested, leaning back in his chair, with his hands resting in his lap. He seemed mentally resting as well as physically, showing little or no interest now in what was going on about him, but merely gazing idly and inattentively at the scene before him. No one took the slightest notice of him, apparently. After about 10 minutes of this relaxation some other child placed a box of cylindrical insets before him. (I noticed that this was frequently done by an older child when he or she saw a younger child sitting idle.) He looked at them for a few moments and then straightened himself up and began to work with them in a most masterful way, quickly removing them and then just as quickly reinserting them. If by chance he put the smaller cylinder into the larger hole, he instantly removed it and fitted it into its own place. The whole thing was done with an air of alertness and conscious power which contrasted in a remarkable way with the clumsy and hesitating effort he had made at buttoning the horn buttons. He seemed to take a real pride in inserting and removing the cylinders, such as I had not seen manifested before by any child in the use of this particular material. His erect carriage and concentrated attention gave evidence of his enjoyment of the familiar and well-mastered activity.

It was a striking illustration of the joy which comes from a sense of power over dumb things—"Man's mastery over nature." This

inner joy was evident from the fact that he no longer asked for the stimulation of approval from any outside person, but seemed absolutely unconscious and unmindful as to whether anyone knew or cared for this wonderful new skill of his, which could fit cylinders into holes and take them out again just as he pleased. Truly in this case it was not the *information* as to varying dimension, but rather the *inspiration* of power felt. After exercising his skill much as a musician would run his fingers lightly over the keys of the piano, he began playing with the cylinders by purposely putting the smallest cylinder into the largest hole and smiling to himself at his joke. When he had reached this stage the rosy-cheeked nun brought a much smaller child, a wee bit of a baby, not more than 2½ years of age, to sit beside Master Roly-poly, and placed a similar box of cylinder insets before this little fellow. Was the deed intentionally done, or did she merely happen to place him with Master Roly-poly's familiar instrument so close to him? The result was that when Wee Baby began to pull the first cylinder out of its socket Master Roly-poly promptly assisted him, and from that time until the recess he superintended and assisted Wee Baby in his difficult task of learning not to try to put little cylinders into big holes or to let big cylinders roll away, but to set them on their flat faces. The 3-year-old boy did it in such a fatherly and manful way, now and then reaching over and assisting Wee Baby when he "just couldn't for the life of him" get the right cylinder into the right hole. There was at no time an assumption of superiority. (He had too recently himself come through that trying ordeal.) When the time came for putting the material away, Master Roly-poly saw to it that his own box of cylinders was in order; he then helped Wee Baby put all of his cylinders in correctly, and gathering up the two boxes in his short, fat arms, he started to take them to the cupboard with such an air of manly ability, when an older child came along and authoritatively seized the two boxes and carried them to the cupboard. His face clouded with keen disappointment, but he submitted, as the weak must always submit to the strong, and stood wistfully watching the older child put the treasures into the cupboard. The rosy-cheeked nun stood near by, but seemed not to see the check which this young soul had received—so blind are the best of us.

I frequently saw this usurping by older children of the opportunity for self-help on the part of the younger children, and I wondered if it was a part of the discipline of the system, or merely one of those accidents to which we all have to submit. When the children went out into the courtyard for their play period, my blessed little Roly-poly, who had gained such mastery over cylinder insets that he could direct an apprentice in the art, again showed the hin-

drance caused by his overfed body. He could not keep up with the other children when they ran races, try as he might, and he tried heroically with all his might. Each time he came trotting in at the tag-end of the race, but he showed pluck and determination to master the job, for when the other children stopped their racing and began the more pleasing exercise of climbing up some stair steps and walking down again he continued to trot to the far end of the loggia and back again all alone. Evidently he had set himself to the task of learning how to run, and he continued to run. No wonder he had already grown to be "master of insets," and doubtless will succeed to be master of much more if he continues to persist in mastering difficult tasks. No one took the least notice of his trotting back and forth, with his arms close to his side, his fists doubled in true athletic fashion.

After a time, when the other children were playing a singing game with gestures, he came and stood by the side of the rosy-cheeked nun and quietly observed them. He made no attempt whatever to join in this far too difficult task for him. Wise little head! I longed desperately to go to him and play with him and awaken more power in his resolute young heart.

At luncheon time he was just as slow and deliberate as his heavy body demanded. When I left the room at 12.45 he had not finished his soup, although the other children were putting away their lunch baskets, and little Miss Fidget, in her office as waitress, had been to his side several times to ask if he did not wish her to remove the soup plate. But it was such a task for his fat little hand to close firmly enough around his spoon handle, to fill its bowl with soup, and to command the not yet well-coordinated muscles of his short, round arm to carry the spoon full of soup to his waiting lips. Then, besides, there was so much for him to see that he had to stop eating now and then just to look, and look, and look, but the young nun did not hurry him, and even little Miss Fidget was good natured in her waiting.

The Montessori didactic material has the advantage of being self-corrective; that is, while the child is merely handling the material and enjoying the aimless activity, he incidentally discovers the right and the wrong way to handle it. If not fitted into the right place, it refuses to be fitted in at all, and he begins all over again and thus voluntarily masters his own wayward lack of attention and concentration. At the same time it gives dawning perception of dimension and geometric form. The material has its limitations, but it undoubtedly absorbs the interests of young children and develops their power of concentration at this stage of their growth. I have seen as many as 80 visitors in the room where there were only a dozen

children, but none of them were in the least disturbed by or seemingly conscious of the presence of the visitors. The building blocks, clay for modeling, water-color paints, colored crayons, and blackboards (which were hung low enough for the children to write on) are also among the materials used, as in the kindergarten.

For some reason Dr. Montessori does not see the value of play with clean, disinfected sand—a universal, racial play material of all children of all races, because it is the most easily controlled, the most adjustable and most suggestive of the play materials which nature furnishes for small and unskilled hands. Dr. Montessori also disapproves of the use of paper and scissors, by means of which kindergartners have led their children to a wealth of knowledge about the primitive processes of the industrial world and the beginning of pictorial art. Mothers who have learned "construction work" and "free-hand cutting" in their kindergarten days have taught their children to entertain themselves endlessly and to develop their creative power amazingly by the use of a small pair of blunt-pointed scissors and ordinary wrapping paper, or even old newspaper. Of course, paper construction is to be discarded when the child is skilled enough to use satisfactorily and unaided more permanent building materials, but its very flexibility is one of its advantages in that it encourages effort and quickens the imaginative power of the young beginner in craftsmanship. And where is the child who does not love to "cut out" pictures if he has learned how to handle scissors? However, this leads to ideas that are not connected with the child's personal experiences, inasmuch as through pictures he can go far afield, and the Montessori method would keep him within the limits of his own sense-perceived experiences.

Next after the stage of growth of the young child who is seeking activity for activity's sake comes the beginning of self-expression regardless of the form. For this stage of development the Montessori material makes little or no provision.

IV. EXERCISING THE MUSCLES OF YOUNG CHILDREN.

The definite and organized muscular exercise of the body is another thing that Dr. Montessori wisely insists is an important part of the young child's education. And she practically carries this training forward by having even the very small children learn to climb stairs and ladders, to swing from poles and trapeze, to race with one another to a goal and back again, as well as to walk on a painted line, or a crack in the floor, and thereby to coordinate their muscles for easy, well-poised use of the body.

Herein again Froebel and Montessori essentially agree. Froebel says:

In teaching the child to stand and walk, we should use neither perambulators nor leading strings. He should stand when he is strong enough to keep his balance freely and independently, and he should walk when, freely moving forward, he can independently keep his balance. He should not stand before he can sit erect, draw himself up by some tall object near by, and thus keep his balance without support. He should not walk before he can creep, rise freely, maintain his balance, and proceed by his own effort.

Dr. Montessori says:

If there exists an age in which it is necessary to protect a child by means of a series of gymnastic exercises, between 3 and 6 years is undoubtedly the age. The special gymnastics necessary, or, better still, hygienic in this period of life, refer chiefly to walking.

She then explains that the limbs, not having yet attained unto their full proportion of strength and growth, are much weaker than the torso, and as a rule are still very short as compared with the body. From this she argues—

The tender bones of the limbs must therefore sustain the weight of the torso, which is disproportionately large. We can not, if we consider all these things, judge the manner of walking in little children by the standards set for our own equilibrium. If a child is not strong, the erect posture and walking are really sources of fatigue for him, and the long bones of the lower limbs, yielding to the weight of the body, usually become deformed and easily bowed. * * *

We are wrong, then, if we consider little children from this physical point of view as little men. They have, instead, characteristics and proportions that are entirely special to their age. The tendency of the child to stretch out his back or kick his legs in the air is an expression of physical needs, related to the proportions of his body.

Such passages as this in Dr. Montessori's writings delight the heart of the kindergartner, in that they so exactly correspond with a theory which underlies the little exercises known to her as "Play with the limbs." The real physical significance of these exercises has perhaps too often been overshadowed by the spiritual meaning assigned to them—that of awakening the child to a consciousness of his power over his own limbs. In this respect, the doctor-teacher has again laid us under obligation by strongly emphasizing the physical importance of the slow and unforced development of the child's body:

The baby loves to walk on all fours just because, like the quadruped animals, his limbs are short in comparison with his body. Instead of this, we divert these natural manifestations by foolish habits which we impose on the child. We hinder him from throwing himself on the earth, from stretching, etc., and we oblige him to walk with grown people and to keep up with them.

She describes a very ingenious device which she invented—a little fence made of strong wires stretched in parallel lines and supported at intervals by wooden palings driven into the ground. Along the

fence ran a little ledge on which the children were in the habit of sitting down when they were tired. She says:

I found that little ones of 2½ years of age would often drop out from the marching line and instead of sitting down would run to the little fence, catching hold of the upper line of wire; they would walk along sideways, resting their feet on the wire which was nearest the ground, moving themselves along on the wires, pulling their bodies sideways. Thus they discovered for themselves a way of moving along without throwing the weight of their bodies upon their weak legs.

Several other devices for similar purposes are described in her writings on muscular training.

One has but to watch the average proud father striding along in his Sunday afternoon stroll with his little 2 or 3 year old child trotting eagerly and energetically by his side to realize how much this explanation of the physical conditions of a child's body is needed. How often we hear an intelligent-looking father say to a sobbing 3-year-old child who is begging to be carried, "No, papa will not carry you. You must learn to walk like a little man." Over and over again similar scenes are enacted in the daily life of the average child. A very earnest and conscientious mother, who, however, had not learned to consider the physical difference between herself and her child, came to my kindergarten one morning, and sitting down beside me, said, quite emphatically, "I came down this morning to confess. I gave Albert a good, round spanking last night, and he deserved it, tôo!" (She and I had previously had quite a long talk concerning the right and wrong methods of punishing children.) The look of defiance in her eyes and emphatic tone of her voice showed me that it was no time to argue with her, so I merely said, "Is that so? What had he done?" She replied:

"I took him down town with me yesterday afternoon to have some shoes fitted on him, and as I had some other shopping to do, we were quite late in getting home, and it was his supper hour. I was so tired that I told the nurse to give him his supper and put him to bed. He refused to go without me as I usually sat and talked with him as he ate his supper. I was so tired that I felt I needed rest before my own dinner hour, and therefore told the nurse to take him in her arms and carry him to the nursery. At this he began to kick and scream. I allowed this to go on for five minutes or more, and then I followed them to the nursery and gave him a good, round spanking, which settled him for the night."

Then she added, half apologetically, "I was so tired, I couldn't help it." I looked at her a moment and then said quietly, "And so you expected Albert's little body to be less fatigued than yours, and for him to have more control over his nerves than you were able to maintain." The tears came into her eyes, and I left her to attend to other duties. No one who reads Dr. Montessori's eloquent plea

against over-fatigue for a little child, could make such a mistake as this.

In speaking of the muscular exercises needed by children in the lower grades of school, Dr. Montessori says:

> The generally accepted idea of gymnastics is, I consider, very inadequate. In the common schools we are accustomed to describe as gymnastics a species of collective muscular discipline which has as its aim that children shall learn to follow definite ordered movements given in the tone of command. The guiding spirit in such gymnastics is coercion, and I feel that such exercises repress spontaneous movements and impose others in their place.

She does not seem to realize that all up-to-date American schools now emphasize games and sports that call forth physical activity. An example of this is the revival of folk dances in the graded schools. One of the important features of the kindergarten is the amount of muscular training which the child gets in the rhythmic plays and dancing games. There is also a little rhythmic work in the Montessori schools. The children are allowed, when they choose, to keep time to some regular march music or occasionally to very simple rhythmic music. Still more of this has been introduced into the American Montessori schools. I saw a few gesture songs in the Roman schools, but they are infrequent and are limited to representations of the child's own experiences. The Montessori system does not hold these gesture songs and dramatic plays to be important means of self-expression. The system fails to take into account that all children love to dramatize, not only the life about them but what they hear talked of by their elders or what is related to them in story form. There is no reason why the two forms of physical exercises can not be combined more fully than they are at present. In each center where little children are gathered there should be swings, stair steps, walking planks, jumping bars, etc.; so that, together with various forms of dramatic play, there might also be certain simple apparatus for definite and organized physical development.

Dramatic play is one of the important features of the kindergarten. By means of it the child's imagination, as well as his body, is developed. He "makes believe" that he is this or that object or person. Thus, much of the necessary coordination of muscles and the poise and mastery of the body are gained by flying like birds, galloping like horses, hopping like frogs, and by various other dramatic presentations, in which the body is thoroughly exercised. This form of play has the added advantage that ideas are gained as well as easy grace of bodily movement, although it does not insure as accurate and ready a mastery of muscular movement as the formal exercises in running, jumping, etc. Both forms of muscular exercise are valuable.

Dr. Montessori sees the value of the mental images made by the muscular sense and urges the importance of handling objects, declaring that the sense of touch is by far the most important sense to be developed in early childhood, and the one that is oftenest forbidden for the sake of the convenience of grown people. In one of her lectures she wittily remarked that if seeing and hearing were as troublesome to the average adult as was the touching of objects, we should undoubtedly hear parents and teachers say, "Do not see that!" "Do not hear that!" as often as they now say, "Do not touch that!" This emphasis upon the training of the sense of touch is one of the very strong points, pedagogically considered, of her method—although our own Dr. Dewey long ago pleaded earnestly for the satisfying of the "touch hunger" of children. What he felt the need of was self-corrective materials, which, while satisfying touch hunger, would also develop accuracy and the consciousness of mastery. Kindergartners, it is true, have opportunities in their work with the children to have much handling of objects, but as a rule it is a haphazard exercising of this sense.

In this connection it is interesting to note how Froebel saw and stated this same instinctive tendency in very young children to form mental images by tracing the outline of objects with their finger. In "education of man" he says:

> Here a child traces a table by passing his fingers along its edges and outlines, as far as he can reach them. Thus the child sketches the object on the object itself, as it were. This is the first, and for the child, the safest step by which he becomes aware of the outlines and form of objects. In like manner he sketches and studies the chair, the bench, the window. * * * Many things are gained by these proceedings of the child: A clear conception of forms, the power to represent the forms independently, the fixing of the forms as such, strengthening and practice of the arm and hand in free representation of these.[1]

This in no way need detract from Dr. Montessori's use of the same tendency in children, or the rediscovery of it. It merely shows how much the kindergartners have yet to learn from the source of their inspiration and their own study of the instinctive activities of children. Dr. Montessori certainly deserves great credit in applying this tendency to teaching the letters of the alphabet. It is not necessary to enlarge upon the remarkable results that have been obtained in the rapid mastery of writing and consequently of reading, by the device of giving children 2-inch-long script letters, made of sandpaper, which they learn to trace with the first two fingers of the right hand, moving the fingers from left to right and thereby strengthening the muscles used in ordinary writing. This evidently did not occur to Froebel, who probably had in mind the fact that the mental image of form led to the awakening of the art instinct in children,

[1] Section 37.

or their desire to express their ideas in form, which comes much earlier than the arbitrary means of expression by the letters of the alphabet. In the judgment of the majority of educators of to-day this more complex instrument of self-expression comes much later in the child's development. The time for learning to read and write must, of course, depend on the stage of development of each child: but any device that will lessen for the child the difficult task of learning to write and do away with the stupid copy-book should be welcomed with joy.

V. TRAINING OF THE SENSES.

Dr. Montessori has given a definite and scientific organization of exercises which will not only develop the first fundamental sense of touch, but will also train the mind through each of the senses into keener and clearer distinguishing of different sense impressions.

Some of her exercises call for the combined use of two and three of the senses. She makes clear that to her it is of paramount importance to lead the child to the early gaining of these definite, clear-cut, and vivid sense impressions. Owing to her, as yet, inadequate theory of the nature of the self or ego, she believes that all mental activity depends upon the vividness and lasting nature of sense impressions. The kindergartners have always advocated the importance of sense impressions, but in no kindergarten will one see as definite impressions as those given by the Montessori material and methods. The "formal training" of the senses, objected to by some educators, is so infinitesimal that the objection amounts to nothing. It is always individual and rarely ever lasts more than two minutes—just long enough to show the child the right way to handle his material—and is instantly discontinued if the child does not manifest an interest in it.

Seguin, in his report of the educational exhibit at Vienna in 1873, called attention to the distinct differences between "the training of the senses," and "the training through the senses." He claimed that the first was physiological and the second was psychological. He also stated, in this same report, that J. R. Periere, in his work with deaf-mutes, and Dr. Itard, in his work with the idiot, were the only educators who at that time had attained any definite results in the training of the senses. He called attention to the fact that at the Vienna Exposition there were plenty of objects by means of which the sense of sight could be trained, but that there was not a single object for the improvement of the sense of touch.

Let us examine more in detail Dr. Montessori's ideas of the training of the senses. She speaks of the limited training which can be

given to the sense organs themselves, but is most enthusiastic over the development which may come to the child through the training by means of the senses. She states:

> Pedagogy is not intended to measure the senses. That belongs to the physiological laboratory work. Pedagogy must educate the senses in a deeper meaning of the term. * * * It is more than likely that the physiological psychologists will draw their conclusion from pedagogy than vice versa.

Her assigned reason for this conclusion is that the instruments of the physiological psychologists are so constructed that they can measure the time between the sensation and the reaction, whereas she would have the instruments so normally used by the child that they do not weary him, in order that the nerves of sensation and reaction may act normally and not abnormally, as is the case in experimental psychology. She treats of the senses under their more recent eightfold division, dividing the sense of touch into tactile (or touch), barick (or weight), thermic (or sensations of heat and cold), instead of the usual division of the senses into the sense of taste, smell, touch, seeing, and hearing; she also adds, "The stereognoestic sense" (which is a combination of muscular and tactile sense). She very strongly urges that the more accurate and truthful the presentation of the external world can be made through the senses the nearer we come to the real qualities and properties of matter. She claims that each one of us literally makes his own world by the mental images stored up within the mind, according to the alertness and exactness of our perceptive powers. She shows how the defective and the insane, as well as the criminal, "sense" the world abnormally. The realization of this same truth has already led to a marked improvement in the treatment of these unfortunates. The insane are no longer considered possessed of a vindictive spirit, but rather as people with brain sickness who can not view the world aright. The defectives are no longer pushed to one side as helpless, but are gently and firmly led to exercise their senses more and more and are trained to gain a livelihood for themselves. Criminals are also placed in hygienic surroundings and brought back to normal health as nearly as possible. We need not, however, turn to these abnormalities to realize how the "alley" or "ateliers" feed the mind with equal readiness. And yet we too often condemn the alley-bred man or woman and praise those who have been surrounded by law, order, beauty, and cleanliness all their lives. One can therefore readily see why Dr. Montessori becomes so eloquent in her pleading for the right environment for children, believing as she does that all "the content of our mind is made up of what we take materially from our surroundings by means of sensations."

Here we come to a true parting of the way between Dr. Montessori and the advocates of the kindergarten. Kindergartners agree with the earnest doctor that the education of the power accurately to register sensation is of the greatest possible help to the practical life of the child; they accept the fact that sense perceptions make the good cook, the economical marketer, the successful shopper, the skillful physician, and the accurate scientist. In fact, almost all the great discoveries in the field of science are more or less the results of accuracy of observation and the development of judgment based thereon. Kindergartners agree that there is a higher value in "refining the sense perception" until the individual is saved from the coarse sensual indulgences of the appetites of the body; but all thinking persons must realize that environment alone can not give equal pleasure to all. *The inner self must be reckoned with.*

VI. THE SILENT GAME.

We come now to one of the most successful manifestations of children's inner self-determining power—the "silent game." The following is Dr. Montessori's statement of it:

The exercise consists in calling attention, when perfect silence has been established, to the ticking of the clock, and to all the little noises not commonly audible to the ear. Finally, we call the little ones, one by one, from an adjoining room, pronouncing each name in a low voice. In preparing for such an exercise it is necessary to teach the children the real meaning of silence. Toward this end I have several *games* of *silence*, which help in a surprising way to strengthen the remarkable discipline of our children.

I call the children's attention to myself, telling them to see how silent I can be. I assume different positions; standing, sitting, and maintain each pose silently, without movement. A finger moving can produce a noise, even though it be imperceptible. We may breathe so that we may be heard. But I maintain absolute silence, which is not an easy thing to do. I call a child and ask him to do as I am doing. He adjusts his feet to a better position, and this makes a noise. He moves an arm, stretching it out upon the arm of his chair; it is a noise. His breathing is not altogether silent; it is not tranquil, absolutely unheard as mine is.

During these maneuvers on the part of the child, and while my brief comments are followed by intervals of immobility and silence, the other children are watching and listening. Many of them are interested in the fact, which they have never noticed before, namely, that we make so many noises of which we are not conscious, and that there are degrees of silence. There is an absolute silence where nothing, absolutely nothing, moves. They watch me in amazement when I stand in the middle of the room so quietly that it is really as if "I were not." Then they strive to imitate me, and to do even better. I call attention here and there to a foot that moves, almost inadvertently. The attention of the child is called to every part of his body in an anxious eagerness to attain to immobility. When the children are trying in this way, there is established a silence very different from that which we carelessly call by that name.

It seems as if life gradually vanishes, and that the room becomes, little by little, empty, as if there were no longer anyone in it. Then we begin to hear the tick-tock of the clock, and this sound seems to grow in intensity as the silence becomes absolute. From without, from the court which before seemed silent, there come varied noises—a bird chirps, a child passes. The children sit fascinated by that silence as if by some conquest of their own. "Here," says the directress, "here there is no longer anyone; the children have all gone away."

Having arrived at that point, we darken the windows, and tell the children to close their eyes, resting their heads upon their hands. They assume this position, and in the darkness the absolute silence returns.

"Now, listen," we say. "A soft voice is going to call your names." Then, going to a room behind the children, and standing within the open door, I call in a low voice, lingering over the syllables as if I were calling from across the mountains. This voice, almost occult, seems to reach the heart and to call to the soul of the child. Each one as he is called, lifts his head, opens his eyes as if altogether happy, then rises, silently seeking not to move the chair, and walks on the tips of his toes, so quietly that he is scarcely heard. Nevertheless his step resounds in the silence and amid the immobility which persists.

This silent game, as witnessed by any visitor to these schools, is a remarkable and surprising evidence of the amount of control a little child can gain over his body in the matter of consciously inhibiting its movement. The silence is felt by all in the room, no matter how many visitors may be present. The amount of self-control which this develops in children (some of whom were not over 3 years of age) is marvelous, and no child, so far as I was able to observe, seemed taxed or strained in doing it; in fact, I saw an added expression of placid rest come upon many of their faces. Just how far such an exercise of concentration and self-control can be developed in our restless and mixed population remains to be seen. We have in our kindergarten a "rest period," but it often is merely arrested physical activity. Even when entire silence is attempted it is usually brought about by the kindergartner going from table to table with her hands folded or clasped together and whispering softly to the children, who imitate and become quiet. This is entirely different from the consciousness of power within to inhibit all external activity as it is induced by an external stimulus, whereas the wonderful silence in these Roman schools is from a will activity awakened within the child by his own volition.

VII. LIMITATIONS OF THE MONTESSORI METHOD.

An attempt is made in the following pages to sum up briefly what seem to be important limitations of the Montessori method.

(*a*) *Emphasis on individual development rather than group training.*—The kindergarten stresses group activities, on the ground that the place for individual training is in the prekindergarten stage,

while Montessori's emphasis is almost exclusively on the development of individuality.

In the well-developed plan of the Frobelian education the coordinating of muscles, the special training of the child's senses, and all such phases of necessarily individual development are expected to come in the nursery. This individual nursery training is strongly emphasized as needed before the child has developed the "group instinct," the latter coming when he is old enough to mingle freely and happily with other children. The kindergartners claim that this training belongs essentially in the home and should not be expected of the teacher in the school, who must attend to large groups of children. The Montessori method neglects almost entirely the training in group activities, which is one of the kindergarten's real contributions to civilization.

(*b*) *No place for stories.*—The failure to make a place for stories is one of the serious limitations in Madame Montessori's theory of the training of little children. Her reason for objecting to stories for young children is based in part on her psychological theory that all activities of the mind are derived from the outside world and are dependent on sense impressions, and that therefore the child should be kept within the realm of his own personal experience until he is at least 7 or 8 years old, and in part upon the fact that in her personal experience she has found it difficult to keep the attention of children under 5 years of age when telling a story. Much depends upon the individual child's previous experience in listening and much on the story-teller's power. Many kindergartners could give a different testimony as to the power of attention that children of 3, 4, and 5 years of age have shown in listening intelligently to simple stories.

Let us confess that oftentimes kindergartners tell stories that are beyond the comprehension of their children. Let us also confess that kindergartners frequently prolong a story unwisely after the restlessness of fatigue has begun to manifest itself in the bodies of the children. Let us also confess that sometimes kindergartners lack discernment as to what is true literature and what is not, and therefore tell "silly" stories, merely because they are found among the old legends or are recommended by some popular leader. They fail to discern that the time-tested myths of the primitive race and symbolic stories which furnish the child's imagination with genuine art forms are one thing and the foolishly exaggerated and capricious fancy of some shallow mind are quite another thing. Occasionally, also, a kindergartner does not tell her story well because she is not interested in it. Yet none of these things alter in the least the value of a good story, well told, any more than poor playing or singing destroys the value of good music, or absurd affectation of manner

spoils grace of movement, or ceremonious and hollow etiquette destroys the charm of true courtesy.

A good story is a work of art, because it is a fitting form for a beautiful content. A story is well told when the story-teller, for the time being, is living in the events related, forgetful of self. Dr. Montessori fails, seemingly, to see what the psychological value of the right kind of a story is, namely, that it takes the child into a larger world than he can possibly enter by means of his senses alone. It furnishes food for his imagination, which in these early years is as hungry as is his desire for sense impression; for the imagination is that power of the human mind which can see things the eyes may not see, can hear sounds not yet created in the actual world. The unwise play upon the "credulity" of a child by giving him false and foolish reasons for the various phenomena of nature or the waste of precious time by entertaining him with the kind of silly fairy tales that have no content does not justify the neglect wisely to guide and develop this great power of seeing the invisible things of the world of yet-to-be.

(*c*) *Lack of material for self-expression.*—With the possible exception of the musical bells (the tones of which the child can recombine in his own way), the rather meager block building, some little clay modeling, and the selection of the color of the crayon pencil to be used in filling in the already traced forms, there seems to be no opportunity for the child to rearrange or make over his material according to his own ideas. This, of course, checks a most important instinct of childhood, namely, the desire to re-create his surrounding according to his own inner ideas. This lack comes also from what seems to be the Dottoressa's limitation in the psychological view of the mind's activity. She insists upon many repetitions of sense impressions before any activity is allowed to the rearrangement or readjustment of these impressions, whereas it is a well-known fact to any observer of young children that as soon as a child gets even a partial mastery of his material he begins to try experiments with it or, in other words, to test his mastery over it by using it according to some plan of his own, suggested oftentime by an accidental arrangement of the materials. In the best of these schools in Rome I saw children trying to use the very limited mathematical material to represent some form of life which their imagination had called up. For example, after putting the cylindrical insets into their sockets a number of times they quite frequently took them out and tried to use them as wheels, on the top of which they placed the block containing the sockets as the body of the wagon. Again, they tried to build houses out of the flat-end spools on which their color thread was wound. These and all similar efforts at free, creative use

of the material were always checked. When we consider the possibilities that lie dormant in the human mind, which are never discovered or never developed because this initiation into creative activity has been so often starved, and that precious activity of the will (the courage to begin a new thing) has been inhibited during the developing years of early childhood, we realize how serious a limitation this is, at this period of the child's growth, just as he is beginning to test his powers and thereby gain confidence in himself. It is not yet sufficiently realized by the educational world at large that this dawning within of a feeling of power to transform the objects of the outside world is the awakening of original, creative instinct.

(*d*) *Lack of definite attitude on religious training.*—Dr. Montessori acknowledges the importance of religious training for little children, but confesses that as yet it is an unsolved problem to her. She seems to feel that a child's spiritual nature will unfold aright if freedom is given to it, if it is in no way warped or stunted by the prejudices and superstitutions of the adult life about it. She believes that, if the child is kept happy and busy, the "life within" will unfold and blossom as does the flower. But the questions arise, "Is it possible to have a child's spiritual nature unfold unhampered by the customs and opinions of the older people about him?" "Does not the spiritual life need spiritual nourishment as much as the body needs physical nourishment?" To all deeply earnest teachers of little children it is self-evident that "the divine spirit which lives and is manifest in the finite has an early, though dim, feeling of its divine origin * * * and that the anticipation and hope, the trust and disposition of childhood show the way"; and we all agree with the founder of the kindergarten in the theory of "animism," that "the child approaches the outer world with the feeling that it, too, is animated and ruled by a spirit like that which animates him; and he is filled with an intense longing to know this all-ruling power." And again we assent when he says, "We trust too little the energizing, uniting power in a child; we respect it too little as a spiritual quickening power."

So far the founder of the kindergarten and the Dottoressa agree. But when Froebel, after declaring that the child unconsciously manifests the divine impulses within him, continues, "but man is to follow it (the manifestation) with *conscious insight*, persisting in what he knows to be right," and emphasizes the need of definite training of this kind by adding, "this should be considered by thoughtful parents who allow their children to grow to school age, without giving the slightest care as to the religious tendency of young minds," then we begin to see the parting of the ways. Psychologically this means that the parent and teacher should *know*

what the right emotions to be nurtured are. The whole history of the race tells us that all religion is an outgrowth of the emotion of reverence for the invisible but ever present power, which is beyond the comprehension of man. We read in the chronicles of the past how this emotion, unguided or misdirected, develops into fear or degenerates into superstition; how, when rightly directed, it develops into true religion, in some form of love, reverence, and unselfish service to mankind. It is the most important subject in all education; for, without a sound religious foundation, without a basic belief in the infinite value of the inner life of man, as compared with mere external prosperity, no individual can be truly happy, no civilization can last long.

It is a grave and serious subject. The child is more often sinned against in his spiritual life than in any other way. He asks us for bread, and we give him a stone! It is upon this vital subject that the psychological study of the kindergarten gives us its most important help, by turning us back from depending on external forms and ceremonies to the reverent study of the inner moods of children, as manifested by their hungry questionings concerning God and the invisible side of life. Often we must answer these questions with "I do not know;" but always we may rest assured that they feel and understand our inner attitude of faith or doubt, of reverence or skepticism. It is this that makes motherhood so sacred, and the office of teacher so great. It is because Froebel takes this view of the religious training of children that his book for mothers gives such definite help in guiding the spiritual life of a little child. Dr. Montessori's writings and her oral teaching appear to be lacking in this important particular.

Notwithstanding the limitations of the present stage of Dr. Montessori's educational method, she has assuredly made a valuable contribution to the better understanding of young children. Had she given us nothing else than her own patient, reverent study of child life, she would have placed us under a debt of gratitude. As it is, she has given much which every earnest mother and true teacher should know and apply to her work.

BULLETIN OF THE BUREAU OF EDUCATION.

[NOTE.—With the exceptions indicated, the documents named below will be sent free of charge upon application to the Commissioner of Education, Washington, D. C. Those marked with an asterisk (*) are no longer available for free distribution, but may be had of the Superintendent of Documents, Government Printing Office, Washington, D. C., upon payment of the price stated. Remittances should be made in coin, currency, or money order. Stamps are not accepted. Documents marked with a dagger (†) are out of print.]

1906.

†No. 1. Education bill of 1906 for England and Wales as it passed the House of Commons. Anna T. Smith.
*No. 2. German views of American education, with particular reference to industrial development. William N. Hailmann. 10 cts.
*No. 3. State school systems: Legislation and judicial decisions relating to public education, Oct. 1, 1904, to Oct. 1, 1906. Edward C. Elliott. 15 cts.

1907.

†No. 1. The continuation school in the United States. Arthur J. Jones.
*No. 2. Agricultural education, including nature study and school gardens. James R. Jewell. 15 cts.
†No. 3. The auxiliary schools of Germany. Six lectures by B. Maennel.
†No. 4. The elimination of pupils from school. Edward L. Thorndike.

1908.

†No. 1. On the training of persons to teach agriculture in the public schools. Liberty H. Bailey.
*No. 2. List of publications of the United States Bureau of Education, 1867–1907. 10 cts.
*No. 3. Bibliography of education for 1907. James Ingersoll Wyer, jr., and Martha L. Phelps. 10 cts.
†No. 4. Music education in the United States; schools and departments of music. Arthur L. Manchester.
*No. 5. Education in Formosa. Julean H. Arnold. 10 cts.
*No. 6. The apprenticeship system in its relation to industrial education. Carroll D. Wright. 15 cts.
*No. 7. State school systems: II. Legislation and judicial decisions relating to public education, Oct. 1, 1906, to Oct. 1, 1908. Edward C. Elliott. 30 cts.
†No. 8. Statistics of State universities and other institutions of higher education partially supported by the State, 1907–8.

1909.

*No. 1. Facilities for study and research in the offices of the United States Government in Washington. Arthur T. Hadley. 10 cts.
No. 2. Admission of Chinese students to American colleges. John Fryer.
*No. 3. Daily meals of school children. Caroline L. Hunt. 10 cts.
†No. 4. The teaching staff of secondary schools in the United States; amount of education, length of experience, salaries. Edward L. Thorndike.
No. 5. Statistics of public, society, and school libraries in 1908.
*No. 6. Instruction in the fine and manual arts in the United States. A statistical monograph. Henry T. Bailey. 15 cts.
No. 7. Index to the Reports of the Commissioner of Education, 1867–1907.
*No. 8. A teacher's professional library. Classified list of 100 titles. 5 cts.
*No. 9. Bibliography of education for 1908–9. 10 cts.
No. 10. Education for efficiency in railroad service. J. Shirley Eaton.
*No. 11. Statistics of State universities and other institutions of higher education partially supported by the State, 1908–9. 5 cts.

1910.

†No. 1. The movement for reform in the teaching of religion in the public schools of Saxony. Arley B. Show.
No. 2. State school systems: III. Legislation and judicial decisions relating to public education, Oct. 1, 1908, to Oct. 1, 1909. Edward C. Elliott.
†No. 3. List of publications of the United States Bureau of Education, 1867–1910.
*No. 4. The biological stations of Europe. Charles A. Kofoid. 50 cts.
*No. 5. American schoolhouses. Fletcher B. Dresslar. 75 cts.
†No. 6. Statistics of State universities and other institutions of higher education partially supported by the State, 1909–10.

1911.

*No. 1. Bibliography of science teaching. 5 cts.
*No. 2. Opportunities for graduate study in agriculture in the United States. A. C. Monahan. 5 cts.
*No. 3. Agencies for the improvement of teachers in service. William C. Ruediger. 15 cts.
*No. 4. Report of the commission appointed to study the system of education in the public schools of Baltimore. 10 cts.
*No. 5. Age and grade census of schools and colleges. George D. Strayer. 10 cts.
†No. 6. Graduate work in mathematics in universities and in other institutions of like grade in the United States.
*No. 7. Undergraduate work in mathematics in colleges and universities. 5 cts.
*No. 8. Examinations in mathematics, other than those set by the teacher for his own classes. 5 cts.
No. 9. Mathematics in the technological schools of collegiate grade in the United States.
†No. 10. Bibliography of education for 1909–10.
†No. 11. Bibliography of child study for the years 1908–9.
*No. 12. Training of teachers of elementary and secondary mathematics. 5 cts.
*No. 13. Mathematics in the elementary schools of the United States. 15 cts.
*No. 14. Provision for exceptional children in the public schools. J. H. Van Sickle, Lightner Witmer, and Leonard P. Ayres. 10 cts.
*No. 15. Educational system of China as recently reconstructed. Harry E. King. 15 cts.
*No. 16. Mathematics in the public and private secondary schools of the United States. 15 cts.
†No. 17. List of publications of the United States Bureau of Education, October, 1911.
*No. 18. Teachers' certificates issued under general State laws and regulations. Harlan Updegraff. 20 cts.
No. 19. Statistics of State universities and other institutions of higher education partially supported by the State, 1910–11.

1912.

*No. 1. A course of study for the preparation of rural-school teachers. Fred Mutchler and W. J. Craig. 5 cts.
*No. 2. Mathematics at West Point and Annapolis. 5 cts.
*No. 3. Report of committee on uniform records and reports. 5 cts.
*No. 4. Mathematics in technical secondary schools in the United States. 5 cts.
*No. 5. A study of expenses of city school systems. Harlan Updegraff. 10 cts.
*No. 6. Agricultural education in secondary schools. 10 cts.
*No. 7. Educational status of nursing. M. Adelaide Nutting. 10 cts.
*No. 8. Peace day. Fannie Fern Andrews. [Later publication, 1913, No. 12.] 5 cts.
*No. 9. Country schools for city boys. William S. Myers. 10 cts.
*No. 10. Bibliography of education in agriculture and home economics. 10 cts.
†No. 11. Current educational topics, No. I.
†No. 12. Dutch schools of New Netherland and colonial New York. William H. Kilpatrick.
*No. 13. Influences tending to improve the work of the teacher of mathematics. 5 cts.
*No. 14. Report of the American commissioners of the international commission on the teaching of mathematics. 10 cts.
†No. 15. Current educational topics, No. II.
*No. 16. The reorganized school playground. Henry S. Curtis. 5 cts.
*No. 17. The Montessori system of education. Anna T. Smith. 5 cts.
*No. 18. Teaching language through agriculture and domestic science. M. A. Leiper. 5 cts.
*No. 19. Professional distribution of college and university graduates. Bailey B. Burritt. 10 cts.
*No. 20. Readjustment of a rural high school to the needs of the community. H. A. Brown. 10 cts.
*No. 21. Urban and rural common-school statistics. Harlan Updegraff and William R. Hood. 5 cts.
No. 22. Public and private high schools.
No. 23. Special collections in libraries in the United States. W. Dawson Johnston and Isadore G. Mudge.
*No. 24. Current educational topics, No. III. 5 cts.
†No. 25. List of publications of the United States Bureau of Education, 1912.
†No. 26. Bibliography of child study for the years 1910–1911.
No. 27. History of public-school education in Arkansas. Stephen B. Weeks.
*No. 28. Cultivating school grounds in Wake County, N. C. Zebulon Judd. 5 cts.
No. 29. Bibliography of the teaching of mathematics, 1900–1912. David Eugene Smith and Charles Goldziher.
No. 30. Latin-American universities and special schools. Edgar E. Brandon.
No. 31. Educational directory, 1912.
No. 32. Bibliography of exceptional children and their education. Arthur MacDonald.
†No. 33. Statistics of State universities and other institutions of higher education partially supported by the State, 1912.

1913.

No. 1. Monthly record of current educational publications, January, 1913.
*No. 2. Training courses for rural teachers. A. C. Monahan and R. H. Wright. 5 cts.
*No. 3. The teaching of modern languages in the United States. Charles H. Handschin. 15 cts.
*No. 4. Present standards of higher education in the United States. George E. MacLean. 20 cts.
*No. 5. Monthly record of current educational publications. February, 1913. 5 cts.

*No. 6. Agricultural instruction in high schools. C. H. Robison and F. B. Jenks. 10 cts.
*No. 7. College entrance requirements. Clarence D. Kingsley. 15 cts.
*No. 8. The status of rural education in the United States. A. C. Monahan. 15 cts.
*No. 9. Consular reports on continuation schools in Prussia. 5 cts.
*No. 10. Monthly record of current educational publications, March, 1913. 5 cts.
*No. 11. Monthly record of current educational publications, April, 1913. 5 cts.
*No. 12. The promotion of peace. Fannie Fern Andrews. 10 cts.
*No. 13. Standards and tests for measuring the efficiency of schools or systems of schools. Report of the committee of the National Council of Education. George D. Strayer, chairman. 5 cts.
No. 14. Agricultural instruction in secondary schools.
*No. 15. Monthly record of current educational publications, May, 1913. 5 cts.
*No. 16. Bibliography of medical inspection and health supervision. 15 cts.
*No. 17. A trade school for girls. A preliminary investigation in a typical manufacturing city, Worcester, Mass. 10 cts.
*No. 18. The fifteenth international congress on hygiene and demography. Fletcher B. Dresslar. 10 cts.
*No. 19. German industrial education and its lessons for the United States. Holmes Beckwith. 15 cts.
†No. 20. Illiteracy in the United States.
†No. 21. Monthly record of current educational publications, June, 1913.
*No. 22. Bibliography of industrial, vocational, and trade education. 10 cts.
*No. 23. The Georgia club at the State Normal School, Athens, Ga., for the study of rural sociology. E. C. Branson. 10 cts.
*No. 24. A comparison of public education in Germany and in the United States. Georg Kerschensteiner. 5 cts.
*No. 25. Industrial education in Columbus, Ga. Roland B. Daniel. 5 cts.
*No. 26. Good roads arbor day. Susan B. Sipe. 10 cts.
*No. 27. Prison schools. A. C. Hill. 10 cts.
*No. 28. Expressions on education by American statesmen and publicists. 5 cts.
*No. 29. Accredited secondary schools in the United States. Kendric C. Babcock. 10 cts.
*No. 30. Education in the South. 10 cts.
*No. 31. Special features in city school systems. 10 cts.
No. 32. Educational survey of Montgomery County, Md.
†No. 33. Monthly record of current educational publications, September, 1913.
*No. 34. Pension systems in Great Britain. Raymond W. Sies. 10 cts.
*No. 35. A list of books suited to a high-school library. 15 cts.
*No. 36. Report on the work of the Bureau of Education for the natives of Alaska, 1911–12. 10 cts.
No. 37. Monthly record of current educational publications, October, 1913.
†No. 38. Economy of time in education.
No. 39. Elementary industrial school of Cleveland, Ohio. W. N. Hailmann.
*No. 40. The reorganized school playground. Henry S. Curtis. 10 cts.
No. 41. The reorganization of secondary education.
No. 42. An experimental rural school at Winthrop College. H. S. Browne.
*No. 43. Agriculture and rural-life day; material for its observance. Eugene C. Brooks. 10 cts.
*No. 44. Organized health work in schools. E. B. Hoag. 10 cts.
No. 45. Monthly record of current educational publications, November, 1913.
*No. 46. Educational directory, 1913. 15 cts.
*No. 47. Teaching material in Government publications. F. K. Noyes. 10 cts.
*No. 48. School hygiene. W. Carson Ryan, jr. 15 cts.
No. 49. The Farragut School, a Tennessee country-life high school. A. C. Monahan and Adams Phillips.
No. 50. The Fitchburg plan of cooperative industrial education. M. R. McCann.
†No. 51. Education of the immigrant.
*No. 52. Sanitary schoolhouses. Legal requirements in Indiana and Ohio. 5 cts.
No. 53. Monthly record of current educational publications, December, 1913.
No. 54. Consular reports on industrial education in Germany.
No. 55. Legislation and judicial decisions relating to education, October 1, 1909, to October 1, 1912. James C. Boykin and William R. Hood.
*No. 56. Some suggestive features of the Swiss school system. William Knox Tate. 25 cts.
No. 57. Elementary education in England, with special reference to London, Liverpool, and Manchester. I. L. Kandel.
No. 58. Educational system of rural Denmark. Harold W. Foght.
No. 59. Bibliography of education for 1910–11.
No. 60. Statistics of State universities and other institutions of higher education partially supported by the State, 1912–13.

1914.

*No. 1. Monthly record of current educational publications, January, 1914. 5 cts.
No. 2. Compulsory school attendance.
No. 3. Monthly record of current educational publications, February, 1914.
No. 4. The school and the start in life. Meyer Bloomfield.

No. 5. The folk high schools of Denmark. L. L. Friend.
No. 6. Kindergartens in the United States.
No. 7. Monthly record of current educational publications, March, 1914.
No. 8. The Massachusetts home-project plan of vocational agricultural education. R. W. Stimson.
No. 9. Monthly record of current educational publications, April, 1914.
No. 10. Physical growth and school progress. B. T. Baldwin.
No. 11. Monthly record of current educational publications, May, 1914.
No. 12. Rural schoolhouses and grounds. F. B. Dresslar.
No. 13. Present status of drawing and art in the elementary and secondary schools of the United States Royal B. Farnum.
No. 14. Vocational guidance.
No. 15. Monthly record of current educational publications. Index.
No. 16. The tangible rewards of teaching. James C. Boykin and Roberta King.
No. 17. Sanitary survey of the schools of Orange County, Va. R. K. Flannagan.
No. 18. The public school system of Gary, Ind. William P. Burris.
No. 19. University extension in the United States. Louis E. Reber.
No. 20. The rural school and hookworm disease. J. A. Ferrell.
No. 21. Monthly record of current educational publications, September, 1914.
No. 22. The Danish folk high schools. H. W. Foght.
No. 23. Some trade schools in Europe. Frank L. Glynn.
No. 24. Danish elementary rural schools. H. W. Foght.
No. 25. Important features in rural school improvement. W. T. Hodges.
No. 26. Monthly record of current educational publications, October, 1914.